tial removal of the gall-bladder, seem to be, in the light of this observation, of possible value.

If, however, the gall-bladder be removed, has it been demonstrated repeatedly, by those who have sufficient experience with the Lyon method, that over a period of from three to six months, no bile can be secured. This observation may be explained by the assumption:

First. That no storage facilities are left soon after the removal of the gall-bladder, these facilities, however, not only as to storage, but also as to bile inspissation, becoming established some months after the cholecystectomy in the form of dilatation of hepatic ducts and the formation of histological elements in the wall of these ducts, securing this inspissation.

Second. By the profound interference with the innervation controlling the relaxation and contraction of Oddi's muscle, leaving the muscle relaxed, the result being that the bile in continuous flow leaves the biliary system, whereby a prolonged continuous drainage of the bile passages is secured.

It gives me particular satisfaction, as an internist who loves to argue with surgeons, of recommending, in cases where thorough drainage is desired, the more radical operation of complete removal of the gall-bladder.

Charles D. Lockwood, M. D. (295 Markham Place, Pasadena, California)—This splendid paper is one of the sanest and most complete discussions of cholecystitis that I have ever heard. Every conscientious surgeon who has had a large experience with gall-bladder surgery has gone through an evolutionary process in his attitude toward the treatment of gall-bladder infections. In our early experience with gall-bladder surgery we rarely removed the gall-bladder, and I think most of the older surgeons will agree with me that our results were very satisfactory.

In looking back over my own work of the past twenty years, comprising about 100 operative cases for gall-bladder disease, I am sure that over 80 per cent of these cases were permanently cured by cholecystotomy. A recent review of some 300 cholecystotomies by Dr. Cullen of Baltimore reveals about the same number of satisfactory results. In view of these excellent results before the days of frequent cholecystectomies, and considering that these results were obtained in the most advanced and unselected cases, I feel that we should not commit ourselves to cholecystectomy in every case. There are cases of advanced liver and pancreatic infection in which I believe that gall-bladder drainage is still the operation of choice, even though it may be necessary later to do a cholecystectomy.

I think we are all agreed as to the advisability of cholecystectomy in hydrops, old thickened and shrunken gall-bladders, gangrenous gall-bladders, and certain cases of empyema of the gall-bladder, but I am sure there is still a place for conservative surgery in this field, and it requires the highest surgical skill and judgment to properly select these cases.

Doctor Boardman (closing)—In closing, I wish to express my appreciation of the kind comments of the previous speakers. However, I am a bit disappointed in Dr. Alvarez' remarks, but still feel justified in recommending in suitable cases, low cholesterin diets, bile salts, or the Lyon treatment.

As regards Dr. Walker's question of the storage function of the gall-bladder, I believe the recent work of Rous and MacMaster will thoroughly answer this.

Finally, let me again plead for an earlier recognition of chronic cholecystitis, followed by a period of systematic and sane medical treatment which, if unsuccessful, should be followed within a reasonable period by surgery.

"I have had three personal ideals: One to do the day's work well and not to bother about tomorrow; the second to act the Golden Rule as far as in me lay towards my professional brethren and towards the patients committed to my care; . . . and the third to cultivate a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride, and be ready when the day of sorrow and grief came to meet it with courage befitting a man."—Osler.

THE PROSTATIC MEDIAN BAR, COMPLICATIONS AND TREATMENT*

By MILEY B. WESSON, M. D., *San Francisco*

The obstructive symptoms of a small median bar and a large benign hypertrophy are the same.

When properly restricted to carefully studied, well-chosen cases, Young's punch operation is very radical and permanently curative.

A median bar once removed does not recur.

There will be no hemorrhages if (1) the operation is properly performed; (2) the patient is kept quiet; (3) water is forced, and (4) drainage is maintained.

Ten successful consecutive Young's punch operations are analyzed from the standpoint of untoward symptoms, their cause and management.

INTRODUCTION

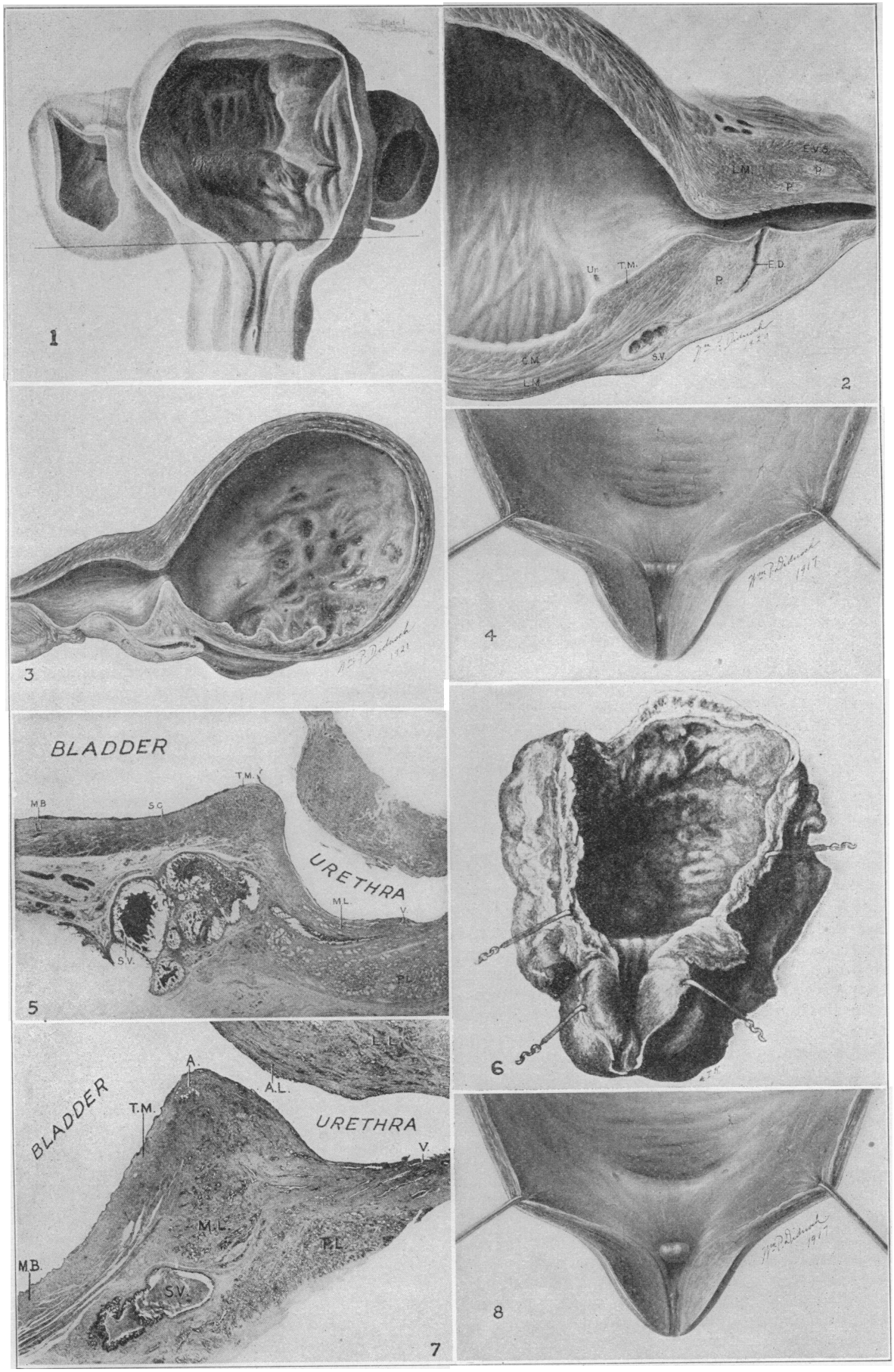
ALL doctors, irrespective of their medical specialties, are interested in the subject of prostatism. Is it because they are all prospective operative subjects? Thirty per cent of all individuals past middle life have prostatic obstructions, though only 15 per cent seek relief from their symptoms. One-half of the obstructions consist of prostatic hypertrophy, benign or malignant, and the remaining 50 per cent are median bars. Drugs may temporarily relieve the symptoms, but eventually the services of a surgeon are required. In this special field the general surgeon is at a disadvantage. He can do a suprapubic prostatectomy as well as a trained urologist, but if the result is not good he can neither tell the reason why nor remedy the defect. Many surgeons have done cystotomies on patients, suffering with all the symptoms of prostatic obstruction, and instead of seeing an enlarged prostate gland have found a tight orifice and a small "fibrous prostate" which could not be enucleated, but had to be "cut out in pieces," with the result that the surgeon had a most trying experience, and the patient generally succumbed. It is here that the technically trained specialist possessing an extensive armamentarium of instruments and a high degree of mechanical skill in using them, acquired only by a prolonged and large clinical experience, is needed.

In preparing this paper a thorough review of the literature of the prostatic median bar was made, in order to ascertain why the punch operation that has proven so uniformly satisfactory in Hugh H. Young's hands during the past fifteen years has not come into universal use. A series of ten successful consecutive punch operations is analyzed from the standpoint of unusual symptoms and their management. Those cases that are ordinarily dismissed with the statement that "the patient recovered after a stormy convalescence" are here given especial attention. All the possible reasons for failure of the operation and the methods of avoiding disaster are elucidated.

HISTORY

The first description of the median bar and its treatment is found in the lectures delivered in 1830 by G. J. Guthrie (Fig. 1) before the Royal College of Surgeons in London. However, in 1850 Mercier,

*Read at the Twenty-first Annual Meeting of the Nevada State Medical Association, Bowers Mansion, Nevada, September 13, 1924.



1. The first median bar reported: "The examination after death showed nothing peculiar save the five pouches and the **bar** at the neck of the bladder formed by its elastic but now rigid substance, totally unconnected with the third or middle lobe of the prostate." (Guthrie.)

2. Normal vesical orifice—sagittal section of bladder and prostate.

3. Median bar with beginning undermining of hypertrophied trigon; marked trabeculation of bladder wall, and cellule formation.

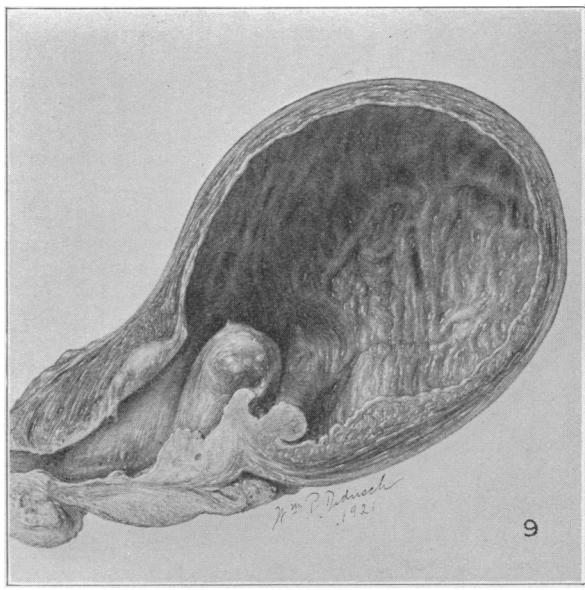
4. Median bar, type I. (Young and Cecil.)

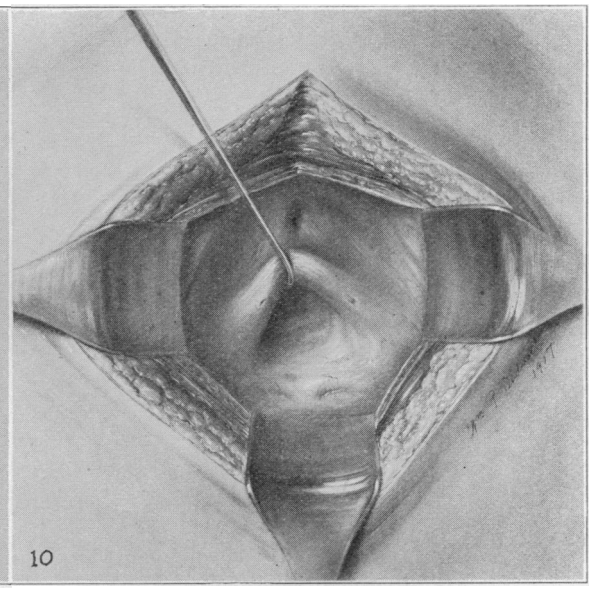
5. Microscopic sagittal section of fibrous median bar, type I.

6. Median bar encroaching on vesical trigon and causing shortening and transverse creasing, type II. (Randall.)

7. Median bar in which glandular elements predominate over sclerosis—microscopic section, type III.

8. Isolated hypertrophy of subcervical gland, type IV. (Young.)





9. Large Albarran's lobe, commonly confused with middle lobe of prostate.

10. As the result of back pressure from a median bar there occurred a hypertrophied trigon, which functioned as a dam causing incomplete retention. Splitting the trigon did not effect a cure, and neither did several punch operations, since part of the original obstruction at the vesical orifice persisted; however, a very thorough punch operation with many cuts resulted in apparently a permanent absence of residual urine. (Young and Wesson.)

who was a voluminous writer and very aggressive, was awarded a prize of 1500 francs by the French Academie of Sciences for the discovery of the median bar, and to this day is given the credit by all textbooks, the name of the real discoverer never being mentioned. Guthrie's descriptions are accurate, yet he was robbed of the credit due him, because of his gentle retiring nature and dislike of publicity. This latter trait, as well as his two operative procedures, is well illustrated by the following extracts from his book published in 1834: "The object is to divide the bar, dam, or stricture, with as little injury as possible to any of the neighboring parts. When these are sound, as far as can be ascertained, I recommend its being done by an instrument which Messrs. Everill and Mason, of St. James' street, have made at my suggestion, being an improvement on the central perforator or lancet of Mr. Stafford, which renders it capable of cutting on the side, and of being easily cleaned. Messrs. Everill and Mason wished to call it my instrument; but as I never claimed more in any instrument than the suggestion, leaving the mechanism entirely to the artist, I have begged them to take to themselves any or all the merit which may be due to it or them." His perforator or punch would not cut the dense fibrous bars, so he advised "in the very advanced stages of the disease, when the bar is fully formed, a small perineal incision should be made on a grooved director and the bar cut with a probe-pointed, strong, but narrow knife." Sixty-seven years later Fuller redescribed this method of cutting the bar, while Chetwood changed it slightly by using an electrocautery blade —a modified Bottini operation.

ETIOLOGY

Median bars are of two general types: (1) Congenital, and (2) acquired. Young found that the histories indicated that 5.6 per cent of his cases were congenital. In the first group are included the cases, described by Englisch, of the congenital absence of the prostate, the hypoplasia of the gland first manifesting itself at puberty with obstructive symptoms. The majority of the cases occur secondarily to some inflammatory reaction. Ciechanonski believed that there was a deposit of fibroplastic material (connective tissue) which, if beneath the mucosa of the entire bladder, caused a permanently contracted bladder, below the bladder neck caused a contraction of the orifice, or in the prostate resulted in a small fibrous prostate; while Belfield looked upon the perivesicular infections as the source of the fibroid indurations of the base and neck of the bladder. The German schools teach that atrophy of the prostate occur from various causes, and that, because of propinquity, a sclerotic bar forms at the region of the bladder sphincter. However, it is generally agreed that the median bars are secondary to infections of the seminal vesicles and prostate.

Camaro of Milan, Italy, advanced a clever theory to explain the unaccountable cases; he thinks the sources of obstructions are prostatic adenomata so minute as not to be detected by the cystoscope, but only to be felt by the finger. Fowler has described small intraurethral projecting prostatic lobes which can be diagnosed only with a cystourethroscope. The theory of retention, due to atony of the bladder as taught by Guyon and Albarran, has long been discredited.

PATHOLOGY

A median bar (Figs. 2, 3) is an obstruction involving the posterior vesical lip, unassociated with changes of an obstructive character elsewhere in the prostate, bladder, or posterior urethra.

Great confusion of nomenclature has resulted from the introduction of clinical descriptions by surgeons. Randall, by his painstaking study has clarified the field and given us an accurate classification. He described four distinct types: (1) A narrow bar

(Fig. 4) made up of firm, dense sclerotic tissue, forming an abrupt angle with the lateral walls of the vesical outlet (Fig. 5); (2) a fibrous bar encroaching on the trigon rather than on the urethra with a shortening of the trigon, due to transverse creasing (Fig. 6); (3) a glandular bar with the hypertropic process confined to the gland acini of the posterior prostatic commissure inside of the prostatic capsule and under the sphincteric muscle which raises the posterior vesical lip into a broad obstructing bar, unassociated with visible hypertrophic changes in the lateral lobes. It is a prostatic hypertrophy associated with inflammatory sclerosis (Fig. 7); and (4) isolated hypertrophy of a subcervical gland (Fig 8), commonly called an Albarran's lobe (Fig. 9).

SYMPTOMS

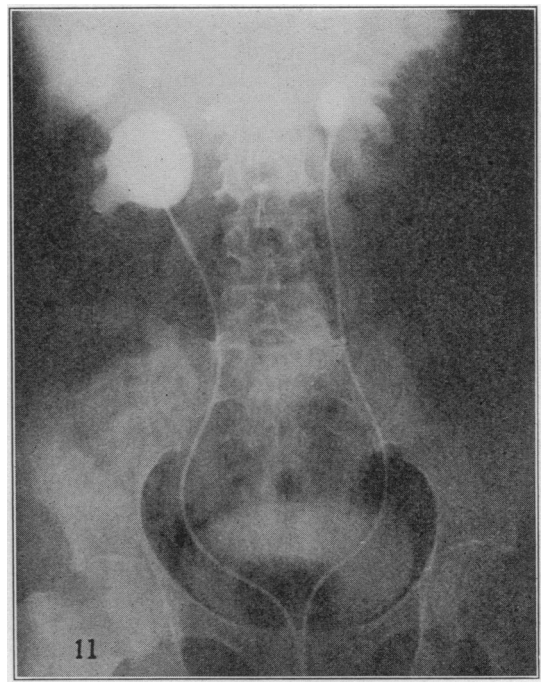
The general symptoms are those of urinary obstruction and are the same as of hypertrophy of the prostate. If the urinary retention is not relieved there is failing health, with drowsiness, headache, gastro-intestinal disturbances and, eventually, nocturnal thirst.

Hugh H. Young, in a personal communication, states that an analysis of his 355 cases showed that in the punch cases pain was as prominent a symptom as was retention in the cases of hypertrophy. The symptoms for which he performed the punch operation were in their order of frequency as follows: (1) Frequency of urination, 82 per cent; (2) pain, 53 per cent; (3) difficulty, 50 per cent; (4) small stream, 42 per cent; (5) weak force, 40 per cent; (6) urgency, 25 per cent; (7) occasional complete retention, 11 per cent; (8) incontinence, 8 per cent; (9) sudden stoppage, 8 per cent; (10) complete retention, 7 per cent; (11) urination incomplete, 5 per cent. The painful symptoms are distinctly more frequent, more annoying and distressing than in prostate hypertrophy; not infrequently they overshadow everything else and the patient seeks relief on account of the irritation. The location of the pain was: (1) Urethral, 21 per cent; (2) bladder-neck, 18 per cent; (3) end of penis, 15 per cent; (4) perineum, 14 per cent; (5) suprapubic, 12 per cent. Sexual symptoms were practically negligible and occurred for the most part in patients past middle life.

There is no relation between the size of the obstruction and the amount of retention. The function tests show kidney impairment to be as great as in cases of prostatic hypertrophy, hence they must receive the same careful preliminary treatment as do prostatectomy cases. The worst complications (Figs. 10 and 11) are often secondary to small bars that have been overlooked.

DIAGNOSIS

Median bars must be differentiated from hypertrophy of the prostate, organic stricture of the urethra, papilloma, and spinal cord lesions. The history is of importance, and as a rule those cases above 55 years of age are suffering from hypertrophy, while the younger ones have bars. In Young's series one patient was 7, twenty were under 30, and five were over 80 years of age. Hematuria is common in benign prostatic hypertrophy and rare in median bars. In bars the prostate is of normal size and consistency on rectal palpation. Sounds of large size often pass with ease, although a uniformly contracted, tight orifice may resist the passage of a very small one. When viewed through a suprapubic opening the vesical orifice may appear normal, but when an attempt is made to dilate it with a finger-tip there is found a tight thickened ring which offers a firm resistance. Since the introduction of the Wassermann reaction, spinal cord lesions have become of minor consideration. However, with the cystoscope, cases of tabes have been diagnosed where the serological test was negative.



11. Hydronephrosis (bilateral) secondary to a median bar.

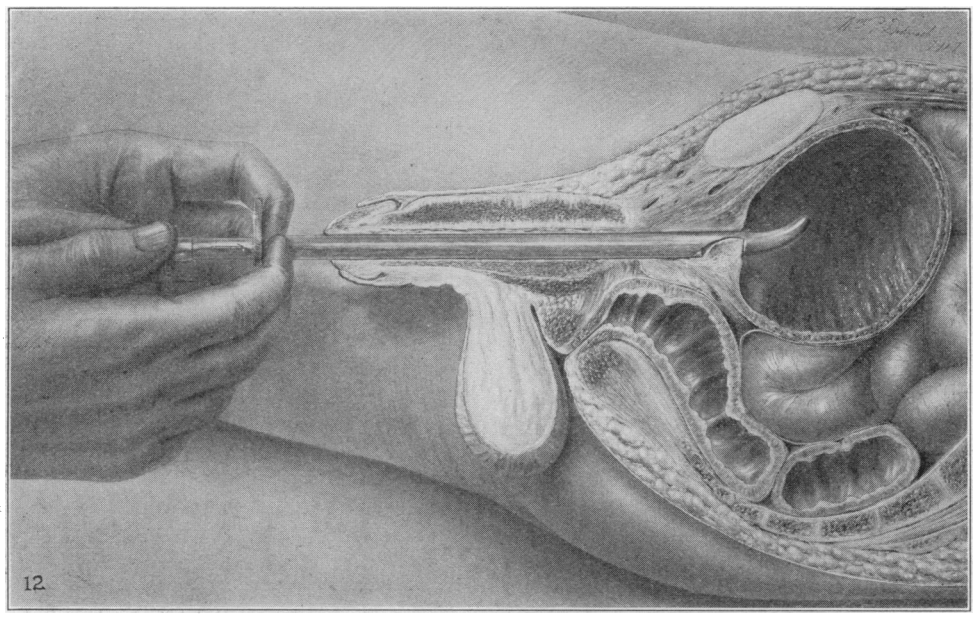
The diagnosis of a median bar is made upon four positive findings: (1) Residual urine; (2) trabeculation of the bladder wall; (3) slight lateral clefts, and (4), with the finger in the rectum and the cystoscope in the urethra, there is a distinct "jump" as the beak of the instrument, which is being gradually withdrawn, passes over the vesical lip.

OPERATION

Only four types of operation should be considered: (1) Young's punch; (2) cautery punch; (3) sphincterotomy, and (4) fulguration. The perineal and suprapubic procedures are unnecessarily mutilating and dangerous.

The punch method is, in principal, that described by Guthrie in 1830, but it remained for Young to perfect the instrument, define the group of patients suffering from obstruction at the vesical neck, to which the punch is applicable, and describe the method (Figs. 12-19) and results to be expected in types of cases. In 1909 he did his first punch operation, and the method, with very few changes, has become standardized. When properly performed upon selected cases, beautiful and brilliant results can be obtained.

The cautery punch devised by Young in 1911 and



12. Young's punch in operation. The outer tube has been withdrawn far enough to entrap the median bar in the fenestra, as indicated by a checking in the flow of the fluid. The hands of the operator are shown ready to push the inner tube home. (Young.)

popularized by Caulk in 1920, consists of a slow-burning, heavy knife in an irideo-platinum sheath. Hemorrhage is stopped by the heat, so that no catheter is required for the drainage, and the operation can be done in the office. Caulk has had no local or systemic reactions, although others have not been so fortunate.

"Sphincterotomy per urethram" was described by the late J. T. Geraghty in 1922, as a simple office procedure which was rarely followed by even blood-stained urine. The instrument is a modified Young's punch, the circular knife being replaced by a wedge-shaped concave blade, so that a single cut is made through the bar instead of removing a section. This is the method used by Guthrie, who, in describing his operation, said: "The knife being projected just as the instrument is felt to be passing the bar, will cut it; and if, after it has just passed into the bladder, it will be withdrawn, the little knife, in coming back, will enlarge the original cut. If the bar be thin or narrow, I have no doubt of the possibility of dividing it in this way without doing mischief; and in two cases in which I tried it, I have reason to believe the object was effected." I have not used the sphincterotome, but a personal communication from E. W. Beach (Sacramento) states that in a series of seven cases he found it very satisfactory and efficacious. In three cases he used no retention catheter, but in the remaining four cases it was necessary—one hemorrhage being so severe as to necessitate two blood transfusions.

Bugbee, in 1911, reported nine cases treated with the Oudin current one-quarter inch spark, direct contact, burning until the hydrogen bubbles ceased to form. Three to six treatments were required to cut the bar, and there was no bleeding and no retention.

Fulguration with the D'Arsonval current has been successfully used. However, the burns are deep and secondary hemorrhages tend to occur several weeks after the patients are cured and have returned home.

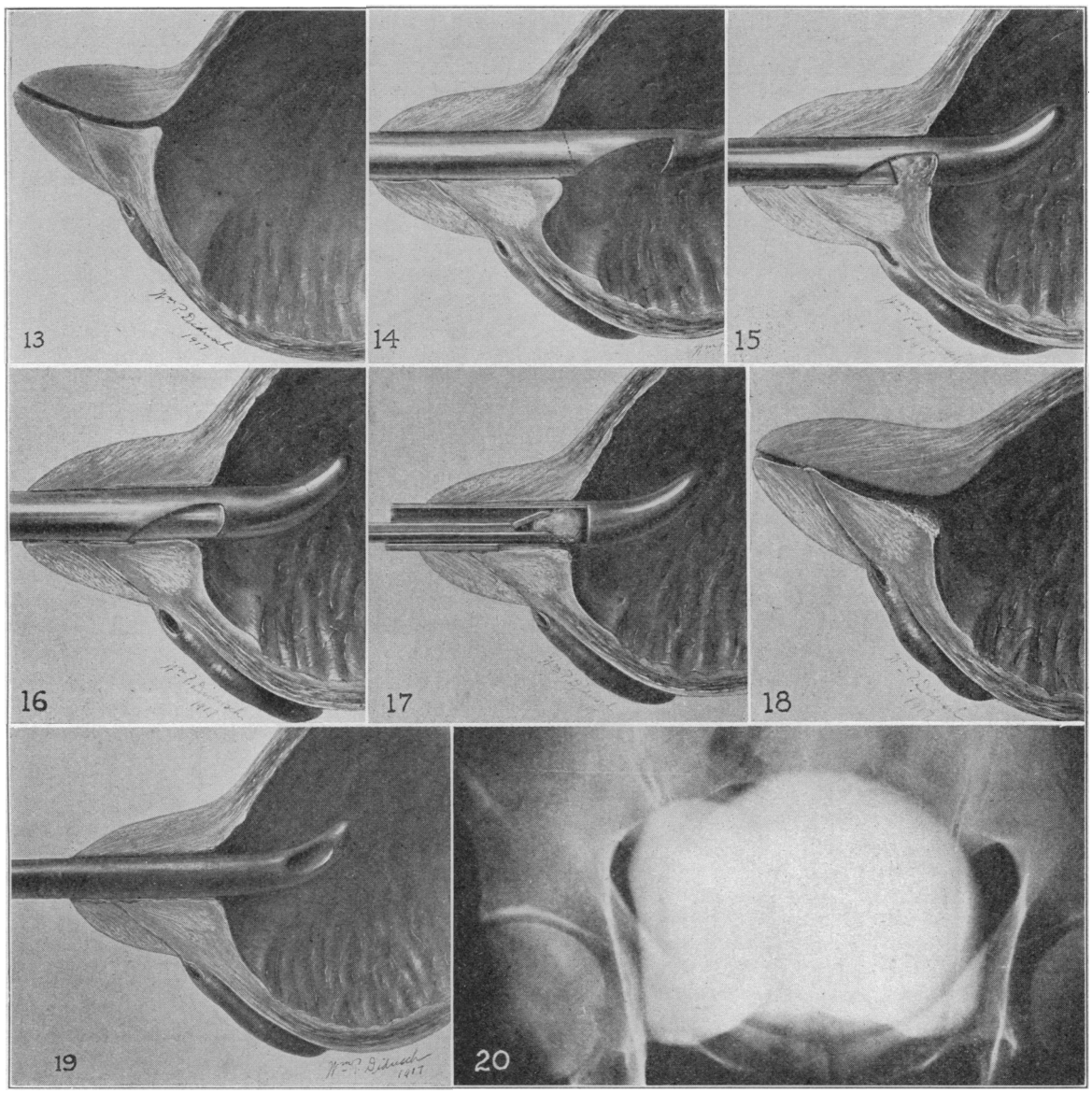
UNUSUAL SYMPTOMS AND COMPLICATIONS

A series of ten consecutive punch operations is analyzed from the standpoint of untoward symptoms, their cause and management. The operations were performed upon private patients ranging in age from 40 to 75, the average age being fifty-eight and one-half years. Although a history of gonorrheal infection was not elicited from each one, an examination of the prostatic and seminal vesicle secretion showed clumps of pus in every case.

The only anesthetic was an urethral injection of 4 per cent novocain, and in all of the cases the operation was painless. It was a routine procedure to have the coagulation time of the blood determined before operation, and to give a hemoplastic preparation in the operating room. In view of the recent report of the Council on Pharmacy and Chemistry of the American Medical Association, warning against the indiscriminate use of such preparations because of the danger of fatal anaphylaxis, this step will have to be guarded in the future. A hypodermoclysis of 3000 cc. of saline was given each patient upon the return to his room from the surgery, and a minimum fluid intake by mouth of 5000 cc. was maintained throughout his hospital stay.

Caffeine sodium benzoate, grains III (hypo), as a routine emergency order (to be given by the nurse) demonstrated its value in one case. The pulse rate of a patient with ventricular extra-systoles dropped to less than 40, and was barely perceptible shortly after his return from the operating-room, and, as sometimes happens, just as all the doctors had gotten out of call; a half-hour later when I saw him he was in perfect condition.

Four of the cases had large vesical diverticula. In two cases these were not removed, as the general condition of the patients did not warrant the risk,



13. Longitudinal section showing a typical median bar elevated above the trigon without enlargement of the prostate. (Young and Cecil.)

14. The punch instrument has been introduced well into the bladder and the inner tube drawn upward, thus opening the fenestra through which urine begins to escape. The median bar is seen depressed by the shaft of the instrument. (Young.)

15. The cutting inner tube is excising the median bar. (Young.)

16. The cut is completed and the section is in the tube. (Young.)

17. Sectional view showing the removal of the excised mass of prostatic tissue with the urethroscopic clamp. (Young.)

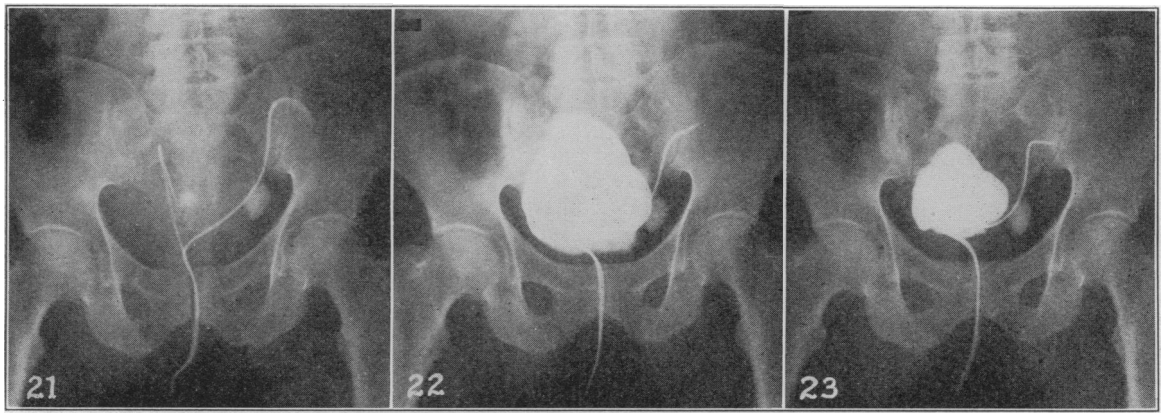
18. The completed operation. (Young.)

19. Drainage of bladder with a large catheter, 30 F coude, after removal of the prostatic bar or contracture. (Young.)

20. Cystogram showing two large diverticula, secondary to a median bar.

but in the other two, diverticulectomies were done. Young's suction method was successfully used in one case (Fig. 20), but failed in the other, as the pouch was attached deep in the perineum. In this case there was a complete retention, the residual urine being 1000 cc. The stones present (Fig. 21) were removed by means of a sponge stick; a retrovesical dissection was made and the sac (Figs. 22, 23) freed, except at its apex, invaginated and removed. The open punch operation, supplemented by an incision with a scalpel, was performed in both of these cases.

The number of cuts made in the routine operation varied from three to twelve; the first was made posteriorly (great care being taken not to catch the hypertrophied interureteric ridge) and the punches ceased when the vesical orifice was fully dilated, as shown by the failure of the punch to engage. After three cuts, great care must be used, for, if the sheath is not firmly engaged, there is danger of it slipping just as the punch is sent home, and the cut will be made in the urethra. Swinburne reports the punch slipping into the pendulous urethra and hanging by a bent tooth, so that he had to do an external urethrotomy to remove it. Clipping off the verumontanum is not an uncommon procedure, and is undoubtedly responsible for the disturbances of sexual function which sometimes follow this operation. The

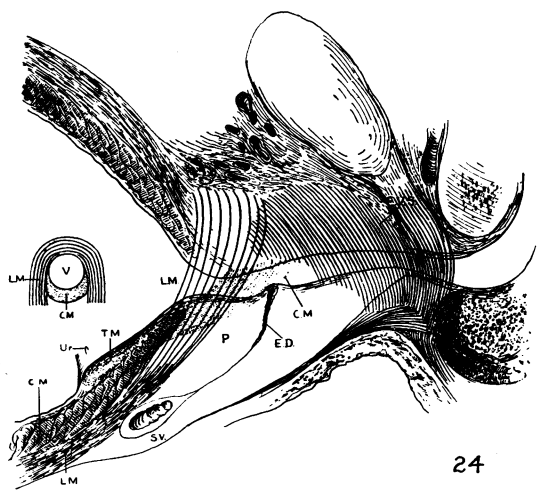


21. Median bar causing complete retention and a large diverticula. A catheter in the left ureter is apparently in contact with a calcified lymph gland; the second catheter points to the stones in the bottom of the diverticulum.

22. A cystogram that conceals the diverticulum, but exposes the calcified lymph gland.

23. A diverticulogram made by filling the bladder with air after the patient had voided.

specimen removed generally consists of fibrous tissue, smooth muscle fibers, and gland acini; but if the anterior bite is sufficiently deep it may get striated muscle (Fig. 24).



24. Schematic view of the muscle of the bladder orifice, showing how deep a cut would have to be made in order to include striated muscle fibers, E. V. S.

Just as important as the mechanical excision of the bar by the punch is the placing of the catheter. The tendency is to use too small a catheter and, unless specifically ordered, the dealers supply those with only one eye, and if this happens to lie against the trigon there will be no drainage. A 30 F. Coude catheter with two eyes should be used. If it is properly located and firmly fixed all hemorrhage will stop within a few hours. In this series, clear urine was passing in all cases in from two to twenty-four hours.

There was one secondary hemorrhage, because of a dull punch, the inadvertent use of too small a catheter (29 F.) and with a single eye, and some poor adhesive plaster that did not hold the catheter in position. The patient's urine was clear at the end of twenty-four hours, but because I had used a poorly sharpened punch which tore off a large piece of mucosa I thought best to leave the catheter an additional twenty-four hours. During the night the catheter ceased to drain, due either to the single eye rotating against the trigon, or slipping into the prostatic urethra. A poorly trained orderly advised the patient to stand by the side of the bed and strain, which he did, and eventually he succeeded in starting a stream, but it was blood and not urine. When I saw him he announced that he was going to die, and confessed that he had come to the hospital expecting that result. The catheter was removed and a metal clot-aspirator substituted, but the oozing continued. Although his red blood count was 4,340,000, a blood transfusion was done because of his mental condition rather than his physical; two days later this was repeated. At the end of five days the urine was clear and the "clot sucker" was removed. He then developed a toxic delirium of a religious type, and became so violent that he had to be restrained. The patient had been trained as a priest, but became an agnostic; his attack was precipitated by the actions of his religious male nurse trying to reconvert him, and was ended three days later, when a priest, who was called after midnight, upbraided him for his "thoughtlessness in disturbing a Father's rest," and returning after daybreak continued the scolding. This brought back his old hatred for the Church, and at 8 a. m. he was mentally normal. He left the hospital fourteen days after operation, having gained twenty-two and one-half pounds. I might say in passing that I never knowingly operate upon a patient who thinks he is predestined to die from the operation.

Many of the commercial punches should not be used, as they do not fit snugly and tend to tear the tissue rather than cut. I use one given me by Dr. Young and made by his mechanic from non-rustable steel. It is routinely sharpened by an expert immediately before use. This instrument broke while in use in one case just as it became firmly engaged; in cutting through a very fibrous bar, considerable force was used and the flange became unsoldered from the sheath. With the aid of a pair of Lane bone-forceps and some strips of adhesive plaster, the shaft was held and the operation successfully concluded.

The urethral spheroids described by Fowler, I found in a man of 54 who also had a bar. The bar was removed, 60 cc. of residual urine disappeared, and a toxic man became active and alert.

Following the removal of the catheter, after the urine has become clear, there is no difficulty in voiding for several days; then there may be sufficient edema of the vesical neck to require catheterization. Great care must be used or a secondary hemorrhage will be started. A No. 18 silver catheter with a short beak is ideal. One of my patients developed a retention at night, and a new intern used a No. 12 silver catheter with a long curve, which penetrated the urethral mucosa and resulted in a suburethral infiltration. Atypical symptoms of pneumonia followed, and it required considerable search to find the cause of the rise in temperature and chills.

The patients cannot be dismissed as cured when they leave the hospital. The bar is gone, but not the symptoms. They require the passage of sounds, instillations, hydraulic bladder distensions, etc. The posterior urethritis and cystitis does not disappear along with the bar, and the patient wants relief from his symptoms. However, treatments should be postponed for six or eight weeks. Incontinence is an unknown complication.

SUMMARY

Guthrie noted that the punch operation was of little value in cases of benign hypertrophy, since the groove through the hypertrophy allows the adenoma to swell up into the opening. However, it has proven of great value in many cancer cases. Cases of retention, due to a complication of a median bar and a spinal lesion, may be cured by this method.

The punch operation, as perfected by Young, is not a palliative procedure, but is a radical operation, and when properly performed upon suitable cases is 100 per cent efficient. It is exceedingly technical, requiring a very painstaking preliminary study and close attention to details during and after the operation. It should never be performed in a hospital where there is not a careful enthusiastic resident and an efficient orderly.

Each case is a separate problem, and if watched closely, so as to anticipate complications, the patient will make a rapid and uneventful recovery and with a brilliant result. In the hands of a careless staff I can conceive of no operation with so many elements of potential danger. I have never seen a case of hemorrhage where I thought cystotomy was indicated, and Young states that he personally has never done a secondary suprapubic operation upon a punch case for hemorrhage.

In Young's series of 355 punch operations seven cases died in the hospital some time after the operation, but only one death was directly due to the procedure (a cut trigon). Even if all the deaths are counted, the mortality is less than 2 per cent. "One may, therefore, say that when we consider the age of many of these patients and the serious complications which were often present, the punch operation is indeed a very benign procedure."

CONCLUSIONS

1. The median bar and its treatment were first described by Guthrie in 1830.

2. The obstructive symptoms of a small median bar and a large benign hypertrophy are the same.

3. The disturbances of micturition in a man under 55 years of age are generally due to a median bar, while in older men they are probably due to hypertrophy.

4. When properly restricted to carefully studied, well-chosen cases, Young's punch operation is very radical and permanently curative.

5. A median bar once removed does not recur.

6. There will be no hemorrhages if (1) the operation is properly performed; (2) the patient is kept quiet; (3) water is forced, and (4) drainage is maintained.

7. The three common causes of hemorrhage are: (1) the tearing of the mucous membrane by a dull knife; (2) the use of a catheter with one eye, which results in straining because it is not properly placed to maintain drainage; (3) a catheter so small as not to fit snugly against the cut surface and thereby hasten clotting.

8. A slow blood coagulation time is a positive contra-indication for a punch operation.

9. In all cases of persistent hemorrhage or shock, transfusion is indicated before a cystotomy should be considered.

10. The cystoscopic diagnostic signs are: (1) Residual urine; (2) trabeculated bladder; (3) lateral clefts; (4) the "jump" felt by the finger in the rectum pressed against the slowly withdrawn cystoscope in the urethra as the beak passes over the vesical lip.

11. Ten successful consecutive Young's punch operations are analyzed from the standpoint of untoward symptoms, their cause and management.

12. The punch is a dangerous instrument in careless, incompetent hands.

N. B.—I desire to express my appreciation to Dr. Hugh H. Young and William P. Didusch for the use of their original drawings.

1275 Flood Building.

Making Our Remedies Safer—The American Pharmaceutical Manufacturers' Association recently adopted a "Declaration of Belief," which sounds a new and encouraging note: "We believe," says the Association, "that it is the unquestioned obligation of each and every pharmaceutical manufacturer: (a) To manufacture preparations only under proper conditions and of established value, pure and accurate in composition, and true upon, and to, their label; (b) to label, advertise, and merchandise such preparations only in a manner wholly free from misrepresentation of any kind, in complete accord with both the spirit and terms of the applicable laws, and in entire harmony with the highest standard of commercial morality and ethics."

"The trouble," believes the New York Medical Times, "is that the big cities are full of people who were intended in the phylogenetic nature of things to work in a simple way upon a small area of the earth's surface without any undue strain upon the brain or nervous system. Our industrial and profit-seeking civilization takes these peasants, schools them under painful pressure (for them), and then subjects them to a vocational grind that takes them nowhere, without even a pension at the end of the senseless gamut."